

REMARKS

Claims 120-132 remain pending in the application and stand rejected. Claims 124-126, 129, 130, and 132 have been amended herein.

Applicants thank Examiner Bumgarner for the personal interview with Applicants' undersigned counsel, conducted on June 30, 2006. During the interview, representative independent claim 120 was discussed with respect to U.S. Patent No. 5,975,893 to Chishti et al., and Applicants' counsel explained the differences between Chishti '893 and the claimed invention, as discussed more fully below. Applicants now respectfully request reconsideration of the rejections in view of the personal interview and the remarks set forth hereinbelow.

Claims Rejected Under 35 U.S.C. §112

Claims 129-132 stand rejected under 35 U.S.C. §112, first paragraph, with respect to the recitation in claim 129 of "either approval for a custom orthodontic appliance for the patient or for revision." Applicants respectfully traverse this rejection and refer the Examiner to the Specification at page 10, lines 1-3, which states:

This results in an ideal dental or clinical archform or other intermediate or final tooth arrangement in which a treatment digital model, in the form of three-dimensional computer images and numerical data, is provided for review, revision or approval by the orthodontist 14.

Applicants further submit that each of dependent claims 130-132 is also supported by the Specification. Applicants refer the Examiner to the Specification, for example, at page 10, lines 1-20. For at least these reasons, Applicants respectfully

request that the rejections of claims 129-132 under 35 U.S.C. §112, first paragraph, be withdrawn.

Claims 120-132 stand rejected under 35 U.S.C. §112, second paragraph, with respect to the recitation of "the provided images", "the person viewing the display", "the display of the images", "the individual anatomy of a patient", and "an orthodontic practitioner". Claim 130 has been amended herein to change "an orthodontic practitioner" to "the orthodontic practitioner." Applicants respectfully traverse the remaining rejections under 35 U.S.C. §112, second paragraph. Specifically, Applicants note that antecedent basis for "the provided images" can be found in claim 120 at line 3, which states "providing for display on a computer screen . . . data of images of the teeth." The recitation of "the person viewing the display" in claim 121 is supported by the language of claim 120 at line 8, which states "from a person . . . who has interactively viewed a display." The recitation of "the display of the images" is supported by the language of claim 120 at lines 8 and 9, which states "a display of the provided images."

For at least the reasons discussed above, Applicants assert that the language indicated by the Examiner finds clear antecedent support in the claims. Applicants have also amended claims 124-126, 129, and 132 to more consistently recite the language of the claims. If the Examiner continues to find any objection to the claim language in terms of antecedent basis, Applicants would appreciate any suggestions for alleviating the Examiner's continued concerns.

With regard to the recitation of "the individual anatomy of a patient," Applicants respectfully assert that persons of ordinary skill in the art, having read the Specification, would clearly understand the scope of the claims as a whole. Specifically, persons skilled in the art would understand that the "anatomy of a patient" refers to the dental anatomy of a patient. Applicants note that "[s]ome latitude in the manner of expression and the aptness of terms should be permitted even though the claim language is not as precise as the examiner might desire. Examiners . . . should not reject claims or insist on their own preferences if other modes of expression selected by applicants satisfy the statutory requirement." (MPEP §2173.02.) Because the language of the claims, as a whole, would reasonably apprise persons skilled in the art of their scope, Applicants submit that the statutory requirement has been met. For at least the reasons discussed above, Applicants respectfully request that the rejections of claims 120-132 under 35 U.S.C. §112, second paragraph, be withdrawn.

Claims Rejected Under 35 U.S.C. §102

Claims 120-132 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 5,975,893 to Chishti et al. Claims 120, 124 and 129 are the only independent claims of this rejected group, and are directed to methods of providing custom orthodontic appliances. Claim 120 recites:

providing for display on a computer screen, with interaction by an operator, data of images of the teeth of the patient in suggested post-treatment tooth positions and orientations that are based on three-dimensional information of the shapes of the teeth of the patient;

receiving feedback information on the suggested post-treatment positions and orientations from a person, other than the operator, who has interactively viewed a display of the provided images on the computer screen; and

providing a custom orthodontic appliance configured to reposition teeth of the patient based on the suggested tooth positions and orientations in accordance with the feedback information.

Claims 124 and 129 recite similar language.

To anticipate a claim under 35 U.S.C. §102, a reference must disclose each and every element recited in the claim. Applicants respectfully traverse the rejection of claim 120 because Chishti '893 does not teach or suggest "receiving feedback information on the suggested post-treatment positions and orientations from a person, other than the operator" or "providing a custom orthodontic appliance . . . based on the suggested tooth positions and orientations in accordance with the feedback information," as required by claim 120. Rather, Chishti '893 is directed to a method of providing a series of orthodontic appliances for repositioning a person's teeth. Chishti '893 discloses how digital data representing the initial tooth arrangement is obtained from a patient (the "initial digital data set", or IDDS). (See Chishti '893 at col. 9, lines 14-27.) A user then manipulates the IDDS following a predetermined algorithm or instructions from a treating professional, to obtain a "final digital data set" (FDDS). Based upon the IDDS and the FDDS, a plurality of "intermediate digital data sets" (INTDDS) are generated by a computer. Orthodontic appliances are then fabricated based on the INTDDS. (See Chishti '893 at col. 10, lines 29-47.)

Nowhere does Chishti '893 teach, or even suggest, steps of providing a custom orthodontic appliance wherein feedback information on the suggested post-treatment positions and orientations of teeth is received from a person other than the operator, or wherein a custom orthodontic appliance is provided based on the suggested tooth positions and orientations in accordance with the feedback information, as required by claim 120. For at least these reasons, Applicants respectfully request that the rejection of claim 120 over Chishti '893 be withdrawn.

Claims 124 and 129 each recite language similar to that discussed above with respect to claim 120. Accordingly, Applicants respectfully request that the rejections of claims 124 and 129 based on Chishti '893 be withdrawn for the reasons discussed above with respect to claim 120.

Claims 121-123 each depend from claim 120, claims 125-128 each depend from claim 124, and claims 130-132 each depend from claim 129. Accordingly, claims 121-123, 125-128 and 130-132 are in condition for allowance for at least the reasons discussed above for claims 120, 124 and 129, and Applicants respectfully request that the rejections of these claims based on Chishti '893 be withdrawn.

Conclusion

In view of the foregoing amendments to the claims and the remarks set forth herein, Applicants believe this case is in condition for allowance and respectfully request allowance of the pending claims. If the Examiner believes any issue requires further discussion, the Examiner is respectfully invited to telephone the undersigned

attorney so that the matter may be promptly resolved.

Applicants do not believe that any fee is due in connection with this submission. However, if any fees are necessary to complete this communication, the Commissioner may consider this to be a request for such and charge any necessary fees to Deposit Account No. 23-3000.

Respectfully submitted,

WOOD, HERRON & EVANS, L.L.P.

By: /David W. Dorton/
David W. Dorton, Reg. No. 51,625

2700 Carew Tower
441 Vine Street
Cincinnati, OH 45202
(513) 241-2324 (voice)
(513) 241-6234 (facsimile)